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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/613,429	07/03/2003	Dieter Herwig	17128.003001	5115

7590 03/21/2006

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EXAMINER

DWIVEDI, VIKANSHA S

ART UNIT	PAPER NUMBER
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3746

DATE MAILED: 03/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/613,429	HERWIG ET AL.	
	Examiner	Art Unit	
	Vikansha S. Dwivedi	3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/19/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12/19/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

Applicant Information Disclosure Statement submitted on 12/19/2005 is acknowledged. Since the submission complies with 37CFR 1.97 and 1.98 the references listed therein have been considered. An initialed and dated copy of Applicant's IDS form 1449 is attached to the instant Office action.

Priority

The priority claimed for the application has been acknowledged.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heminway et al. (U.S. Patent number 4,893,991), in view of either Borsanyi (U.S. Patent number 4,482,347) or European Patent Application 861105120, and further in view of either Von Der Heyde et al. (U.S. Patent number 5,533,866) or Robinson (U.S. Patent number 6,036,459).

Heminway et al. teaches a peristaltic hose pump (Figure 1) of the type having a shaft (20) comprising several eccentric discs each of which carries a bearing and thus moves a pump finger (41-46 Figure 1) transversely to a pump hose wherein: each of the bearings is connected with a connecting rod (27) which engages on a linearly guided pump finger, the pump fingers are arranged at the side of the sealing diaphragm facing the pump hose; wherein the eccentric discs (21) of the shaft (20) are integrally formed to the shaft (20), further comprising; a housing (Column 2, line 34); and a guide plate (48, Heminway) removably mounted to the housing (Shown in Figure 2), the guide plate having a longitudinally extending receiving channel (Shown in Figure 1) for the pump hose (T) and guide channels (Shown in sectional view in Figure 2) for the pump fingers. The hose pump, further comprising: a thrust bearing, for supporting the pump hose (T), attached to the housing, the thrust bearing comprising a projection projecting into the receiving channel. Heminway et al. does not describe the bearings in detail but would appear to be an inherent feature. Borsanyi or European patent application provides detailed structure and teachings for using bearings in a peristaltic pump structure (Borsanyi: Column 3 lines 55-65 and Figure 4, it can also be seen in Figure 2 of the European patent application). The eccentric discs form the inner rings of ball bearings (Figure 4 and 5 of Borsanyi) in order to reduce the friction of rotation. Heminway et al. does not teach a sealing diaphragm disposed between the shaft and the pump hose, wherein the connecting rods pass through the sealing diaphragm, wherein the sealing diaphragm comprises lateral folds permitting an adaptation to the transverse movements of the connecting rod. Von Der Heyde et al. or Robinson teach a

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sealing diaphragm (39 Figure 1: Von Der Heyde et al., and Figure 7(a) and 7(b): Robinson) disposed between the shaft (10: Von Der Heyde et al. and 164: Robinson), wherein the connecting rods pass through the sealing diaphragm (Figure 1: Von Der Heyde et al., and Figure 7(a) and 7(b): Robinson); wherein the sealing diaphragm comprises lateral folds permitting an adaptation to the transverse movements of the connecting rod. Von Der Heyde et al. provides detailed teaching of the membrane usage to prevent leakages into the drive system (Column 10, lines 44-57). At the time of invention it would have been obvious to one of ordinary skill in the art to use the teachings of Borsanyi or the European patent application in view of Von Der Heyde et al. or Robinson to improve the peristaltic pump as presented by Heminway to provide better sealing by preventing the fluids from flowing into the drive system and to reduce the torque and thus protecting the tube or the said pump hose.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vikansha S. Dwivedi whose telephone number is 571-272-7834. The examiner can normally be reached on M-F, 8-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy S. Thorpe can be reached on 571-272-4444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VSD


TAE JUN KIM
PRIMARY EXAMINER